


| | | | | | | | |
|---|------------------------|--|---------|--|--------------|---|-------------|
| AWARD/CONTRACT | | 1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) | | RATING | | PAGE OF PAGES 1 2 | |
| 2. CONTRACT (Proc. Inst. Ident.) NO. EP-C-17-031/68HERC21F0083 | | | | 3. EFFECTIVE DATE See Block 20C | | 4. REQUISITION/PURCHASE REQUEST/PROJECT NO. PR-ORD-20-02264 | |
| 5. ISSUED BY CODE CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001 | | 6. ADMINISTERED BY (If other than Item 5) CODE | | | | | |
| 7. NAME AND ADDRESS OF CONTRACTOR (No., street, country, State and ZIP Code) TETRA TECH, INC. Attn: John Hochheimer 10306 EATON PL STE 340 FAIRFAX VA 22030 | | | | 8. DELIVERY <input type="checkbox"/> FOB ORIGIN <input checked="" type="checkbox"/> OTHER (See below) | | | |
| | | | | 9. DISCOUNT FOR PROMPT PAYMENT | | | |
| | | | | 10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN | | ITEM | |
| CODE 198549560 | | FACILITY CODE | | | | | |
| 11. SHIP TO/MARK FOR CODE ORD RTP Office of Research and Development US Environmental Protection Agency 109 T.W. Alexander Drive Research Triangle Park NC 27711 | | 12. PAYMENT WILL BE MADE BY CODE RTP FMC RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 | | | | | |
| 13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304 (c) () <input checked="" type="checkbox"/> 41 U.S.C. 3304 (a) () | | | | 14. ACCOUNTING AND APPROPRIATION DATA See Schedule | | | |
| 15A. ITEM NO | 15B. SUPPLIES/SERVICES | | | 15C. QUANTITY | 15D. UNIT | 15E. UNIT PRICE | 15F. AMOUNT |
| | Continued | | | | | | |
| 15G. TOTAL AMOUNT OF CONTRACT | | | | | | \$155,875.00 | |
| 16. TABLE OF CONTENTS | | | | | | | |
| (X) | SEC. | DESCRIPTION | PAGE(S) | (X) | SEC. | DESCRIPTION | PAGE(S) |
| PART I - THE SCHEDULE | | | | PART II - CONTRACT CLAUSES | | | |
| | A | SOLICITATION/CONTRACT FORM | | | I | CONTRACT CLAUSES | |
| | B | SUPPLIES OR SERVICES AND PRICES/COSTS | | PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH. | | | |
| | C | DESCRIPTION/SPECS./WORK STATEMENT | | | J | LIST OF ATTACHMENTS | |
| | D | PACKAGING AND MARKING | | PART IV - REPRESENTATIONS AND INSTRUCTIONS | | | |
| | E | INSPECTION AND ACCEPTANCE | | | K | REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS | |
| | F | DELIVERIES OR PERFORMANCE | | | L | INSTRS., CONDS., AND NOTICES TO OFFERORS | |
| | G | CONTRACT ADMINISTRATION DATA | | | M | EVALUATION FACTORS FOR AWARD | |
| | H | SPECIAL CONTRACT REQUIREMENTS | | | | | |
| CONTRACTING OFFICER WILL COMPLETE ITEM 17 (SEALED-BID OR NEGOTIATED PROCUREMENT) OR 18 (SEALED-BID PROCUREMENT) AS APPLICABLE | | | | | | | |
| 17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 0 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.) | | | | 18. <input type="checkbox"/> SEALED-BID AWARD (Contractor is not required to sign this document.) Your bid on Solicitation Number 68HERC21R0017, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your bid, and (b) this award/contract. No further contractual document is necessary. (Block 18 should be checked only when awarding a sealed-bid contract.) | | | |
| 19A. NAME AND TITLE OF SIGNER (Type or print) | | | | 20A. NAME OF CONTRACTING OFFICER Andrea Dehne | | | |
| 19B. NAME OF CONTRACTOR TETRA TECH, INC. | | 19C. DATE SIGNED | | 20B. UNITED STATES OF AMERICA BY  (Signature of the Contracting Officer) | | 20C. DATE SIGNED 01/08/2021 | |
| BY (Signature of person authorized to sign) | | | | | | | |

| | | | |
|---------------------------|--|------|----|
| CONTINUATION SHEET | REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-17-031/68HERC21F0083 | PAGE | OF |
| | | 2 | 2 |

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

| ITEM NO. (A) | SUPPLIES/SERVICES (B) | QUANTITY (C) | UNIT (D) | UNIT PRICE (E) | AMOUNT (F) |
|-----------------|--|-----------------|-------------|-------------------|---------------|
| 0001 | <p>DUNS Number: 198549560</p> <p>TOCOR: Caroline Ridley Max Expire Date: 01/06/2023</p> <p>Delivery: 01/06/2023</p> <p>Period of Performance: 01/08/2021 to 01/06/2023</p> <p>Task Order Issuance Line Item: Technical Support for EPA/ORD Ecological Assessment Programs</p> <p>Accounting Info: 20-21-C-26D2000-000FK7XR4-2532-26A5C-2026D2C037-001 BFY: 20 EFY: 21 Fund: C Budget Org: 26D2000 Program (PRC): 000FK7XR4 Budget (BOC): 2532 Cost: 26A5C DCN - Line ID: 2026D2C037-001 Funding Flag: Complete Funded: \$107,533.84</p> <p>Accounting Info: 20-21-C-26D2000-000F84-2532-26A5C-2026D2C037-002 BFY: 20 EFY: 21 Fund: C Budget Org: 26D2000 Program (PRC): 000F84 Budget (BOC): 2532 Cost: 26A5C DCN - Line ID: 2026D2C037-002 Funding Flag: Complete Funded: \$48,341.16</p> <p>Award Type: Firm Fixed Price</p> <p>Delivery-Invoice Payment Schedule shall not exceed a frequency greater than once a month and 90% of the task order price. Acceptance for invoicing is based on deliverable approval by the TOCOR. For efficient processing IAW FAR clause 52.232-32, performance based payment invoicing amounts will not be submitted until the TOCOR provides deliverable approval. The TOCOR will notify Tetra Tech within 14 days of submission of a deliverable of EPAs intention to approve or disapprove.</p> <p>TOCOR: Ridley.Caroline@epa.gov/(919)541-5341/ridley.caroline@epa.gov</p> <p>ALTOCOR: Schofield.Kate@epa.gov/(202)546-2640/schofield.kate@epa.gov</p> | | | | 155,875.00 |

PERFORMANCE WORK STATEMENT

TETRA TECH, INC.

Contract #EP-C-17-031

PR-ORD-20-02264

SOL: 68HERC21R0017/

Task Order: 68HERC21F0083

Amendment 2

Dated: December 7, 2020

I. Title: Supporting water quality goals through literature and weight of evidence

II. EAS Short Title: Weight of evidence

III. Period of Performance: Date of Task Order award through 24 months following award

IV. Task Order COR:

| Task Order COR (TOCOR) | Alternate Task Order COR (ALTOCOR) |
|--|--|
| Name: Caroline Ridley, PhD | Name: Kate Schofield, PhD |
| Office: EPA/ORD/CPHEA/HEEAD/IEABR 109 TW Alexander Drive (MC: B243-01) Research Triangle Park, NC 27709 | Office: EPA/ORD/CPHEA/HEEAD/IEABD 1200 Pennsylvania Avenue, NW (MC: 8623R) Washington, DC 20460 |
| Phone: 919-541-5341 | Phone: 202-546-2640 |
| Email: ridley.caroline@epa.gov | Email: schofield.kate@epa.gov |

V. Introduction:

The EPA Office of Research and Development's (ORD) Integrated Environmental Assessment Branch-RTP and DC build the capacity of EPA program and regional offices and other decision-makers to assess and respond to potential effects on environmental quality. Research and assessment activities broadly support EPA's mission and responsibilities.

Assembling and interpreting data, information, and evidence related to the health of freshwater environments are challenging tasks. In applying data, information, and evidence to decision-making, the challenge may relate to short timelines of a decision; lack of methods for finding, accessing, and combining evidence in transparent ways; and understanding the current state of the science. Assessment scientists at EPA access, organize, synthesize, interpret, and communicate evidence from the published literature, and develop methodologies for others to do so, so that managers can more easily apply this source of information in their work.

EPA Office of Water (OW), state water quality managers, and local managers are the primary audiences for this effort. OW and state water quality managers work together to determine the cause(s) of water body impairment, develop numeric nutrient criteria that are protective of aquatic life in various types of water bodies (e.g., small streams, large rivers, lakes, etc.), implement other non-regulatory programs

that help to limit the effects of stressors (including nutrients) in aquatic ecosystems, and disseminate decision-relevant information to support these efforts. Local managers often work to comply with these programs to ensure their waterbodies support healthy biological communities.

This Task Order (TO) has several areas. The first area involves developing profiles of states, and the data and scientific literature that are available for making decisions relevant to numeric nutrient criteria. Understanding the amount and types of available information is important, because the first step in a weight-of-evidence approach to decision-making is to assemble the evidence. Profiles will vary based on the decision to be made, the timetable for deciding, the method for developing criteria, the types of monitoring programs in the state and potentially nearby states with similar environments, how much evidence exists in the published literature, and other factors. The eventual use of the profiles will be to write case studies of the application of weight-of-evidence in a diversity of decision-making contexts.

The second area involves investigating how states are implementing the original Stressor Identification (SI) process outlined in the Causal Analysis/Diagnosis Decision Information System (CADDIS; www.epa.gov/caddis). As originally envisioned, this process can be time intensive and the goal of this area will be to identify streamlined SI methods that can make causal assessment more efficient.

The third area involves summarizing methods for and examples of rapid assessment of literature-based evidence (e.g., scoping reviews, evidence maps, etc.). Decision-makers like state nutrient managers often have time and resource constraints and a range of backgrounds and abilities, so this area will support identification and application of valid, easy to use methods of rapid evidence assessment.

The fourth area involves developing website content and layout to coordinate and integrate submerged aquatic vegetation (SAV) monitoring efforts in Chesapeake Bay. This improves the dissemination of information, standardized protocols, and data to monitoring groups, other partners, stakeholders, and decision-makers.

VI. Specific Tasks and Deliverables:

Task 1. Establish communication with the TOCOR, develop a QAPP, and meet all cybersecurity requirements (Contract Level PWS Section 3 and Section 5)

Specifically, the Contractor shall:

SubTask 1.1: Communication/Kick-off call

Within three (3) days of TO award, schedule a kick-off call to take place within 30 days with the TOCOR and appropriate contractor staff to discuss the TO, clarify any initial questions about tasks and deliverables, and confirm the schedule.

SubTask 1.2.A: Draft Quality Assurance Project Plan (QAPP):

Write a draft Quality Assurance Project Plan (QAPP) with the QA Track ID, L-HEEAD-0032824-QP-1. All tasks conducted under this TO shall be performed pursuant to an EPA approved QAPP developed by the Contractor and approved by the TOCOR and QA manager. The QAPP outlines the approach and measures the Contractor shall implement to ensure a high standard of quality in the deliverables. The QAPP shall be in conformance with EPA's *Requirements for Quality Assurance Project Plans* (EPA QA/R-5), and include the following cybersecurity requirements if necessary (see Appendix A for Cybersecurity Tasks Checklist):

Task Q - Secure Technical Implementation

- (a) The Contractor shall use applications that are fully functional and operate correctly as intended on systems using the United States Government Configuration Baseline (USGCB).
- (b) The Contractor's standard installation, operation, maintenance, updates, and/or patching of software must not alter the configuration settings from the approved USGCB configuration.
- (c) Contractor applications designed for normal/regular, i.e., non-privileged end users must run in the standard user context without elevated system administration privileges.
- (d) The Contractor shall apply due diligence at all times to ensure that Federal Information Processing Standard (FIPS) 199 "moderate confidentiality impact" security is always in place to protect EPA systems and information.
- (e) The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer

Task R - Internet Protocol Version 6 (IPv6)

- (a) In accordance with EPA technical standards, all system hardware, software, firmware, and/or networked component or service (voice, video, or data) utilized, developed, procured, acquired or delivered in support and/or performance of this contract shall be capable of transmitting, receiving, processing, forwarding, and/or storing digital information across system boundaries utilizing system packets that are formatted in accordance with commercial standards of Internet Protocol version 6 (IPv6) as set forth in the USGv6 Profile (NIST Special Publication 500-267) and corresponding declarations of conformance defined in the USGv6 Test Program. In addition, devices and systems shall maintain interoperability with IPv4 products.
- (b) Any IP product or system utilized, developed, acquired, produced or delivered must interoperate with both IPv6 and IPv4 systems and products, in an equivalent or better way than current IPv4 capabilities with regard to functionality, performance, management and security; and have available contractor/vendor IPv6 technical support for development and implementation and fielded product management.
- (c) As IPv6 evolves, the Contractor shall upgrade or provide an appropriate migration path for each item developed, delivered or utilized, at no additional cost to the Government. The Contractor shall retrofit all non-IPv6 capable equipment, as defined above, which is fielded under this contract with IPv6 capable equipment, at no additional cost to the Government.
- (d) The Contractor shall provide technical support for both IPv4 and IPv6.
- (e) All Contractor-provided system or software must be able to operate on networks supporting IPv4, IPv6, or one supporting both.
- (f) Any product whose non-compliance is discovered and made known to the Contractor within one year after acceptance shall be upgraded, modified, or replaced to bring it into compliance, at no additional cost to the Government.
- (g) EPA reserves the right to require the Contractor's products to be tested within an EPA or third-party test facility to demonstrate contract compliance.
- (h) In accordance with FAR 11.002(g), this acquisition must comply with the National Institute of Standards and Technology (NIST) US Government (USG) v6 Profile and IPv6 Test Program. The Contractor shall fund and provide resources necessary to support these testing requirements, and it will not be paid for as a direct cost under the subject contract.

(i) The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task T - Contract Performance Information and Testimony

(a) Dissemination of Contract Performance Information. The Contractor must not publish, permit to be published, or distribute to the public, any information, oral or written, concerning the results or conclusions made pursuant to the performance of this contract, without the prior written consent of the Contracting Officer. A copy of any material proposed to be published or distributed must be submitted to the Contracting Officer for written approval prior to publication.

(b) Contractor Testimony. All requests for the testimony of the Contractor or its employees, and any intention to testify as an expert witness relating to: (a) any work required by, and or performed under, this contract; or (b) any information provided by any party to assist the Contractor in the performance of this contract, must be immediately reported to the Contracting Officer.

(c) Subcontract flowdown. The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task U - Rehabilitation Act Section 508 Standards

(a) All electronic and information technology (EIT) procured through this contract must meet the applicable accessibility standards at 36 CFR 1194, unless a FAR 39.204 exception to this requirement exists. 36 CFR 1194 implements Section 508 of the Rehabilitation Act of 1973, as amended, and is viewable at <http://www.access-board.gov/sec508/508standards.htm>.

(b) The following standards are determined to be applicable to this contract:

(1) 1194.21. Software applications and operating systems

(2) 1194.22. Web-based intranet and Internet information and applications

(3) 1194.23 Telecommunications products

(4) 1194.24 Video and multimedia products

(5) 1194.25 Self-contained, closed products

(6) 1194.26 Desktop and portable computers

(7) 1194.31 Functional performance criteria

(8) 1194.41 Information, documentation, and support(c) EPA is required by Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d), to offer access to electronic and information technology for disabled individuals within its employment, and for disabled members of the public seeking information and services. This access must be comparable to that which is offered to similar individuals who do not have disabilities. Standards for complying with this law and any future updates are prescribed by the Architectural and Transportation Barriers Compliance Board ("The Access Board").

(d) Contractor deliverable(s) must comply with these standards.

(e) The final work product must include documentation that demonstrates or provides assurance that the deliverable conforms to the Section 508 Standards promulgated by the Access Board.

- (f) In the event of a dispute between the Contractor and EPA, EPA's assessment of the Section 508 compliance will control, and the Contractor will make any additional changes needed to conform with EPA's assessment, at no additional charge to EPA.
- (g) The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task V - Termination for Default - Failure to Report Information Security Incident

- (a) Definition. *Information Security Incident* is an occurrence that results in actual or potential jeopardy to the confidentiality, integrity, or availability of an information system or the information the system processes, stores or transmits, or that constitutes a violation or imminent threat of violation of security policies, security procedures, or acceptable use policies.
- (b) If the Contractor was aware of an Information Security Incident and did not disclose it in accordance with the requirements specified in this contract or misrepresented relevant information to the Contracting Officer, the Government may terminate the contract for default, debar the Contractor from Government contracting, or pursue such other remedies as may be permitted by law or this contract.
- (c) The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

SubTask 1.2.B: Final Quality Assurance Project Plan (QAPP):

Write a final QAPP addressing TOCOR and QA Officer's written comments on the draft QAPP. The contractor shall not initiate tasks related to any items needing QA review until the TOCOR furnishes, in writing, a notice that the final QAPP for the current period has been accepted by EPA.

The draft QAPP shall be delivered as a Microsoft Word 2016 file and the final QAPP shall be delivered as a Microsoft Word 2016 file and Adobe Acrobat file.

| Task | SubTask | Deliverable | Due |
|------|---------|---------------|--|
| 1 | 1.1 | Kick-off call | Due within thirty-three (33) days after award |
| 1 | 1.2.A | Draft QAPP | Due two (2) weeks after award |
| 1 | 1.2.B | Final QAPP | Due one (1) week after receiving written comments on 1.2.A |

Task 2. Weight of Evidence. (Contract Level PWS Section 2 Task Area 1)

This task involves creating profiles of several states that shall summarize (1) the data and information available to them in making decisions related to numeric nutrient criteria and (2) their decision-making context. Understanding the amount and types of available information and what it will be used for is important, because the first step in a weight-of-evidence approach to decision-making is to assemble the evidence. First, a series of planning calls shall take place to understand decision needs and contexts of OW and up to three states. Then the Contractor shall research a variety of information sources that could be relevant to those decision needs and contexts. Finally, the

Contractor shall write up state profiles utilizing Contractor and TOCOR planning call notes, the information sources consulted, and written comments from the TOCOR on a draft of each state profile. State profiles shall summarize the decision to be made, the timetable for deciding, the types of relevant primary data available in the state and potentially nearby states with similar environments or water body types, the capacity of states to analyze primary data, the capacity of states to conduct or commission new studies to fill gaps in primary data, the method for developing criteria and/or analyzing water quality or aquatic life data related to nutrient criteria, how much and what kind of evidence exists in the published scientific literature, and other relevant factors. The Contractor shall not exceed 280 hours on this task.

Specifically, the Contractor shall:

SubTask 2.1.A: Informational calls with OW and states

Schedule and participate in a series of informational calls with OW and potential state partners.

SubTask 2.1.B: Notes from informational calls

Take notes about perspectives and opinion during informational calls with OW and potential state partners.

SubTask 2.2.A: Draft spreadsheet documenting information sources consulted

Research sources relevant to the decision needs and contexts discussed in the informational calls of up to three states. Sources shall include state websites and the water quality and ecological datasets and existing analyses therein, criteria documents, and databases of evidence extracted from published articles to be provided by TOCOR. Draft results of research shall be recorded in a Microsoft Excel spreadsheet template provided by the TOCOR.

SubTask 2.2.B: Final spreadsheet documenting information sources consulted

Final results of research recorded in a Microsoft Excel spreadsheet addressing written comments from the TOCOR.

SubTask 2.3.A: Draft profiles for up to three states

Write up to three draft state profiles with a summary of each element of the decision-making context (eg, the decision to be made, the timetable for deciding, the types of relevant primary data available in the state and potentially nearby states with similar environments or water body types, the capacity of states to analyze primary data, the capacity of states to conduct or commission new studies to fill gaps in primary data, the method for developing criteria and/or analyzing water quality or aquatic life data related to nutrient criteria, how much and what kind of evidence exists in the published scientific literature [as captured in evidence database provided by the TOCOR], and up to three other relevant factors) based on informational calls and research conducted in Task 2.2.

SubTask 2.3.B: Final profiles for up to three states

Write final state profiles addressing written comments from the TOCOR.

The Contractor shall provide the deliverables for Task 2.1 and Task 2.3 as Microsoft Word files and for Task 2.2 as Microsoft Excel spreadsheets.

| Task | SubTask | Deliverable | Due |
|------|---------|--|--|
| 2 | 2.1.A | Informational calls with OW and states | Due within five (5) months of signing the final QAPP |
| 2 | 2.1.B | Notes from informational calls | Each set of notes due one (1) week after informational call takes place |
| 2 | 2.2.A | Draft spreadsheet documenting information sources consulted and relevant evidence uncovered for each state | Due three (3) months after TOCOR provides Microsoft Excel spreadsheet template |
| 2 | 2.2.B | Final spreadsheet | Due two (2) weeks after written comments from TOCOR |
| 2 | 2.3.A | Draft profiles for up to three states | Due three (3) months after Deliverable 2.2.B |
| 2 | 2.3.B | Final profiles | Due two (2) weeks after written comments from the TOCOR |

Task 3. Summarize current approaches for streamlining stressor identification (Contract Level PWS Section 2 Task Area 1)

The Stressor Identification (SI) process outlined in CADDIS (www.epa.gov/caddis) provides a useful framework for identifying likely causes of biological impairment in streams but can be complicated and time intensive to implement. Many states have adapted the SI process to create a more streamlined approach. This task examines how states have modified the SI process for their use, to compile examples of how states are actually using SI, and identify high priority components of the SI process (i.e., those parts that are critical to identifying or prioritizing causal stressors vs. those parts that states frequently do not or are not able to make use of). The Contractor shall not exceed 250 hours on this task.

Specifically, the Contractor shall:

SubTask 3.1: Planning call

Participate in a planning call with the TOCOR to discuss potential approaches to Task 3. On this call, the Contractor and TOCOR shall discuss existing state SI practices to begin compiling an initial list of states using modified or streamlined SI methods.

SubTask 3.2.A: Draft list of state SI practices

Based on initial discussions on the planning call, plus any additional state examples discovered by the Contractor or the TOCOR in the month following the planning call, the Contractor shall produce a draft list of up to fifteen (15) states with a brief (2-3 bullet) description of each state's innovation(s) in applying SI methods.

SubTask 3.2.B: Final list of state SI practices

Revise the draft list of states based on written comments provided by the TOCOR. In the revised list, the Contractor shall indicate their recommendations for up to seven (7) states to include in SubTask 3.3, along with a 1-2 sentence rationale for each recommendation.

SubTask 3.3: Summary notes of informational calls with relevant state employees

Following completion of SubTask 3.1.B, schedule and conduct informational calls with relevant employees of up to seven (7) states using modified or streamlined SI processes. Calls

should be scheduled to meet the goals of this task (Task 3) and Task 2.1 when state contacts are the same for both tasks. The Contractor shall document which states and employees of those states they speak to and provide written notes (outline form, no more than one [1] page per state) of each informational call.

SubTask 3.4.A: Draft report on state Stressor Identification (SI) methods

Based on results of Task 3.2, prepare report (~20 pages) that summarizes (i) how states have modified or streamlined the SI process for use in their aquatic systems; (ii) examples of how the modified processes have been used in each state; (iii) the strengths and weaknesses of these modifications; (iv) components of the original SI process that are used relatively consistently across states; and (v) any additional suggestions the states may have for improving the SI process. The Contractor shall contact relevant employees of states included under Task 3.3 via phone/web call and/or email for additional clarification and information.

SubTask 3.4.B: Final report on state Stressor Identification (SI) methods

Write final report on state SI methods addressing TOCOR written comments on the draft report prepared under SubTask 3.3.A.

The Contractor shall provide the deliverables for Task 3 as Microsoft Word files.

| Task | SubTask | Deliverable | Due |
|------|---------|--|---|
| 3 | 3.1 | Planning call | Due two (2) months after signing final QAPP |
| 3 | 3.2.A | Draft list of state SI practices | Due two (2) weeks after Deliverable 3.1 |
| 3 | 3.2.B | Final list of state SI practices | Due two (2) weeks after receiving TOCOR written comments on Deliverable 3.2.A |
| 3 | 3.3 | Summary notes of informational calls with relevant state employees | Due two (2) months after Deliverable 3.2.B completed |
| 3 | 3.4.A | Draft report on state SI methods | Due two (2) months after Deliverable 3.3 completed |
| 3 | 3.4.B | Final report on state SI methods | Due one (1) month after receiving TOCOR written comments on Deliverable 3.4.A |

Task 4. Methods for rapid assessment of literature-based evidence (Contract Level PWS Section 2 Task Area 1).

This task involves investigation of the use of rapid assessments of literature-based evidence in addressing environmental questions. The goal is to review, summarize, and apply rapid methods so that they can more routinely be performed by state or regional staff that may have time and resource constraints, and a range of backgrounds and abilities. There are two broad components to this task: (i) reviewing and summarizing methods for and examples of conducting rapid assessments of literature-based evidence (i.e., methods that do not involve a traditional systematic review); and (ii) applying one or more of these rapid evidence assessment methods to a relevant environmental question. The Contractor shall not exceed 450 hours on this task.

Specifically, the Contractor shall:

SubTask 4.1: First planning call

Schedule and participate in a planning call with the TOCOR to discuss potential approaches to this task (Task 4), particularly in terms of reviewing and summarizing methods for and examples of rapid evidence assessments.

SubTask 4.2.A: Draft project outline for reviewing and summarizing rapid evidence assessment methods

Based on the planning call with the TOCOR in Task 4.1, draft a project outline summarizing the proposed approach for reviewing and summarizing rapid evidence assessment methods.

SubTask 4.2.B: Final project outline for reviewing and summarizing rapid evidence assessment methods

The Contractor shall revise this project outline based on written comments received from the TOCOR.

SubTask 4.3.A: Initial progress memo for review and summary of methods

Follow the approach to review and summarize rapid evidence assessment methods in the project outline under Task 4.2. The Contractor shall provide a brief memo (~1-2 pages) summarizing progress when this task (Task 4.3) approximately 50% complete.

SubTask 4.3.B: Final progress memo for review and summary of methods

Provide a final progress memo (~1-2 pages) when approach to review and summarize rapid evidence assessment methods in the project outline is complete.

SubTask 4.4: Second planning call

Schedule and participate in a second planning call with the TOCOR to discuss applying one or more of the rapid evidence assessment methods reviewed in Task 4.3.

SubTask 4.5.A: Draft project outline for methods application

Based on the planning call with the TOCOR in Task 4.4, draft a project outline summarizing the agreed upon environmental question and approach(es) for the application of rapid evidence assessment to it. Approach(es) shall not include extracting detailed evidence from new papers.

SubTask 4.5.B: Final project outline for methods application

The Contractor shall revise the draft project outline for methods application based on written comments received from the TOCOR.

SubTask 4.6.A: Initial progress memo for methods application

Follow the approach for methods application in the project outline under Task 4.5. The Contractor shall provide a brief memo (~1-2 pages) summarizing progress when this task (Task 4.6) approximately 50% complete.

SubTask 4.6.B: Final progress memo for methods application

Provide a final progress memo (~1-2 pages) when approach to methods application in the project outline is complete.

The Contractor shall provide the deliverables for Task 4 as Microsoft Word 2016 files.

| Task | SubTask | Deliverable | Due |
|------|---------|---|--|
| 4 | 4.1 | First planning call | Due two (2) months after signing final QAPP |
| 4 | 4.2.A | Draft project outline for reviewing and summarizing rapid evidence assessment methods | Due two (2) weeks after Deliverable 4.1 |
| 4 | 4.2.B | Revised project outline | Due one (1) week after receiving TOCOR written comments on Deliverable 4.2.A |
| 4 | 4.3.A | Initial progress memo for review and summary of methods | Due two (2) months after Deliverable 4.2.B |
| 4 | 4.3.B | Final progress memo for review and summary of methods | Due two (2) months after Deliverable 4.3.A |
| 4 | 4.4 | Second planning call | Due one (1) month after Deliverable 4.3.A |
| 4 | 4.5.A | Draft project outline for methods application | Due two (2) weeks after Deliverable 4.4 |
| 4 | 4.5.B | Revised project outline for methods application | Due one (1) week after receiving TOCOR written comments on Deliverable 4.5.A |
| 4 | 4.6.A | Initial progress memo for methods application | Due two (2) months after Deliverable 4.5.B |
| 4 | 4.6.B | Final progress memo for methods application | Due two (2) months after Deliverable 4.6.A |

Task 5. Develop wireframes and content for a website designed to coordinate and share information on submerged aquatic vegetation (SAV) monitoring programs in Chesapeake Bay (Contract Level PWS Section 2 Task Areas 5 and 6).

This task involves the development of wireframes (also known as webpage schematics that show webpage layout) and content for a publicly available website designed to coordinate and share information on submerged aquatic vegetation (SAV) monitoring programs in Chesapeake Bay. The goal of the website is to disseminate information, standardized protocols, and data to monitoring groups, other partners, stakeholders, and decision-makers. This task involves: (i) initial planning and participation in stakeholder research to brainstorm and synthesize ideas for layout and content of the website ; and (ii) developing and revising content, visualizations, and wireframes for the website. Initial content (e.g., text, documents, images) for the website shall be provided by the TOCOR. The Contractor shall use this content to develop new visualizations and text and organize all website material according to standardized website templates and style guides (to be provided by EPA). The Contractor shall not exceed 315 hours on this task.

Specifically, the Contractor shall:

SubTask 5.1: Initial task planning call

The Contractor shall schedule and participate in a planning call with the TOCOR and technical staff to discuss the work described under this task (Task 5).

SubTask 5.2.A: First website discussion call with SAV Workgroup

The Contractor shall work with the TOCOR, technical staff, and the Chesapeake Bay Program SAV Workgroup chair to lead a discovery-phase call with the CBP SAV Workgroup to discuss user needs and potential ideas for website design, structure, and content.

SubTask 5.2.B: Second website discussion call with SAV Workgroup

The Contractor shall work with the TOCOR, technical staff, and the Chesapeake Bay Program SAV Workgroup chair to lead a call with the CBP SAV Workgroup to discuss the Contractor's draft memo and associated website content and wireframes.

SubTask 5.2.C: Third website discussion call with SAV Workgroup

The Contractor shall work with the TOCOR, technical staff, and the Chesapeake Bay Program SAV Workgroup chair to lead a call with the CBP SAV Workgroup to discuss the Contractor's revised memo and associated website content and wireframes.

SubTask 5.3.A: Draft memo documenting website content and wireframes

Based on the calls in SubTasks 5.1 and 5.2, the Contractor shall draft a memo that (i) presents draft content for the website (existing and/or newly developed text and visualizations, along with links to existing documents and websites); and (ii) provides wireframes of this content that follow standardized website templates and style guides provided by EPA. Wireframes shall be presented as Word documents with visualizations embedded; all visualization files also shall be provided separately in a format compatible with Microsoft Photo. This memo also shall include any initial recommendations for future functionalities, identified during SubTasks 5.1 and 5.2, that are beyond the scope of the current task (e.g., direct data entry).

SubTask 5.3.B: Revised memo documenting website content and wireframes

Based on the call in SubTask 5.2.B and written comments provided by the TOCOR, the Contractor shall revise the draft memo. The revised memo shall include any revised or newly created content and visualizations, as well as updated wireframes.

SubTask 5.3.C: Final memo documenting website content and wireframes

Based on the call in SubTask 5.2.C and written comments provided by the TOCOR, the Contractor shall finalize the revised memo. The revised memo should include any revised or newly created content and visualizations, as well as updated wireframes.

Contractor shall provide the deliverables for Task 5.3 as Microsoft Word 2016 files and in a format compatible with Microsoft Photos.

| Task | SubTask | Deliverable | Due |
|------|---------|---|---|
| 5 | 5.1 | Initial task planning call | Due one (1) month after signing final QAPP |
| 5 | 5.2.A | First website discussion call | Due within one (1) month after Deliverable 5.1 |
| 5 | 5.2.B | Second website discussion call | Due within one (1) month after Deliverable 5.3.A |
| 5 | 5.2.C | Third website discussion call | Due within one (1) month after Deliverable 5.3.B |
| 5 | 5.3.A | Draft memo documenting website content and wireframes | Due within two (2) months after Deliverable 5.2.A |

| | | | |
|---|-------|---|---|
| 5 | 5.3.B | Revised memo documenting website content and wireframes | Due within two (2) months after Deliverable 5.2.B |
| 5 | 5.3.C | Final memo documenting website content and wireframes | Due within two (2) months after Deliverable 5.2.C |

VII. Acceptance Criteria:

The Contractor shall prepare high quality deliverables. Deliverables shall be edited for grammar, spelling, and logic flow. The technical information shall be reasonably complete and presented in a logical, readable manner. Figures/vizualizations submitted shall be of high quality, similar to those in presentations developed for national scientific meetings and shall be compatible with Microsoft Photos Version 2020.20090.1002.0. Citation library deliverables shall be compatible with EndNote X9. Spreadsheet and report deliverables shall be compatible with Microsoft Office 2016. PDFs shall be compatible with Adobe Acrobat Version 2020.009.20074.

| SUMMARY SCHEDULE OF DELIVERABLES | | | |
|---|----------------|--|--|
| Task | SubTask | Deliverable | Due |
| 1 | 1.1 | Kick-off call | Due within thirty-three (33) days after award |
| 1 | 1.2.A | Draft QAPP | Due two (2) weeks after award |
| 1 | 1.2.B | Final QAPP | Due one (1) week after comments on 1.2.A |
| 2 | 2.1.A | Informational calls with OW and states | Due within five (5) months of signing the final QAPP |
| 2 | 2.1.B | Notes from informational calls | Each set of notes due one (1) week after informational call takes place |
| 2 | 2.2.A | Draft spreadsheet documenting information sources consulted and relevant evidence uncovered for each state | Due three (3) months after TOCOR provides Microsoft Excel spreadsheet template |
| 2 | 2.2.B | Final spreadsheet | Due two (2) weeks after written comments from TOCOR |
| 2 | 2.3.A | Draft profiles for up to three states | Due three (3) months after Deliverable 2.2.B |
| 2 | 2.3.B | Final profiles | Due two (2) weeks after written comments from the TOCOR |
| 3 | 3.1 | Planning call | Due two (2) months after signing final QAPP |
| 3 | 3.2.A | Draft list of state SI practices | Due two (2) weeks after Deliverable 3.1 |

| SUMMARY SCHEDULE OF DELIVERABLES | | | |
|---|----------------|---|---|
| Task | SubTask | Deliverable | Due |
| 3 | 3.2.B | Final list of state SI practices | Due two (2) weeks after receiving written TOCOR comments on Deliverable 3.2.A |
| 3 | 3.3 | Summary notes of informational calls with relevant state employees | Due two (2) months after Deliverable 3.2.B completed |
| 3 | 3.4.A | Draft report on state SI methods | Due two (2) months after Deliverable 3.3 completed |
| 3 | 3.4.B | Final report on state SI methods | Due one (1) month after receiving TOCOR written comments on Deliverable 3.4.A |
| 4 | 4.1 | First planning call | Due two (2) months after signing final QAPP |
| 4 | 4.2.A | Draft project outline for reviewing and summarizing rapid evidence assessment methods | Due two (2) weeks after Deliverable 4.1 |
| 4 | 4.2.B | Revised project outline | Due one (1) week after receiving TOCOR written comments on Deliverable 4.2.A |
| 4 | 4.3.A | Initial progress memo for review and summary of methods | Due two (2) months after Deliverable 4.2.B |
| 4 | 4.3.B | Final progress memo for review and summary of methods | Due two (2) months after Deliverable 4.3.A |
| 4 | 4.4 | Second planning call | Due one (1) month after Deliverable 4.3.A |
| 4 | 4.5.A | Draft project outline for methods application | Due two (2) weeks after Deliverable 4.4 |
| 4 | 4.5.B | Revised project outline for methods application | Due one (1) week after receiving TOCOR written comments on Deliverable 4.5.A |
| 4 | 4.6.A | Initial progress memo for methods application | Due two (2) months after Deliverable 4.5.B |
| 4 | 4.6.B | Final progress memo for methods application | Due two (2) months after Deliverable 4.6.A |
| 5 | 5.1 | Initial task planning call | Due one (1) month after signing final QAPP |
| 5 | 5.2.A | First website discussion call | Due within one (1) month after Deliverable 5.1 |
| 5 | 5.2.B | Second website discussion call | Due within one (1) month after Deliverable 5.3.A |

| SUMMARY SCHEDULE OF DELIVERABLES | | | |
|---|----------------|---|---|
| Task | SubTask | Deliverable | Due |
| 5 | 5.2.C | Third website discussion call | Due within one (1) month after Deliverable 5.3.B |
| 5 | 5.3.A | Draft memo documenting website content and wireframes | Due within two (2) months after Deliverable 5.2.A |
| 5 | 5.3.B | Revised memo documenting website content and wireframes | Due within two (2) months after Deliverable 5.2.B |
| 5 | 5.3.C | Final memo documenting website content and wireframes | Due within two (2) months after Deliverable 5.2.C |